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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/038,529  | 01/03/2002  | Mahesh Jayachandra   | 13860.2US01                 | .6029                  |
| 23552 7590 08/09/2007<br>MERCHANT & GOULD PC<br>P.O. BOX 2903<br>MINNEAPOLIS, MN 55402-0903 |             |                      | EXAMINER<br>ALPHONSE, FRITZ |                        |
|   |             |                      | ART UNIT<br>2112            | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/038,529 | <b>Applicant(s)</b><br>JAYACHANDRA, MAHESH |  |
|                              | <b>Examiner</b><br>Fritz Alphonse    | <b>Art Unit</b><br>2112                    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-25 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-14, 16-20, 26-28 and 30-35 is/are rejected.
- 7) ☒ Claim(s) 10, 15 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

0.1 This Office Action is in response to the Petition for Review filed on 1/30/2007. Claims 1-35 are pending.

#### ***Response to Amendment***

1. The Affidavit filed on 1/30/2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the Laukkanen reference. The (Exhibit A) submitted does not provide any pertinent evidence.

2. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the 1/20/2001 of Laukkanen reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897).

#### ***Claim Objections***

3. Claim 29 is objected to because of the following informalities: the period (.) after "standard keyboard" in line 13 should be replaced by a semi column (;). Appropriate correction is required.

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

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is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3, 26, 30, 31, 32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 11, of copending Application No. 10/875,344. Although the conflicting claims are not identical, they are not patentably distinct from each other because.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. Claims 1-3, 26, 30, 31, 32 of the instant application contains substantially the limitations of claims 1-2 and 11 of U.S. Patent Application No. 10/875,344. See the table below.

| Instant Application No. 10/038,529   | Copending Application No. 10/875,344.   |
|--|---|
| 1. A character input system using a keyboard comprising a plurality of keys, at least some of the keys each being assigned at least one Hindi script character, and at least one key being | 1. A character input system using a keyboard comprising a plurality of keys, at least some of the keys each being assigned at least one Brahmi-derived script character, and at least |

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|--|--|
| <p>assigned a halant, the key assignments being spatially grouped on the keyboard according to their phonetic characteristics.</p> <p>2. The character input system of claim 1 wherein the key assignments are also grouped according to the vowels and consonants.</p> <p>3. The character input system of claim 2 wherein Hindi script consonants are spatially grouped according to Vargs and Non-Vargs.</p> <p>-----</p> <p>30. A character input system using a keyboard comprising a plurality of keys, at least some of the keys each being assigned at least one Hindi script character, and at least one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to the vowels and consonants, their phonetic characteristics and the method in which the characters are learned.</p> <p>-----</p> <p>31. A character input system using a keyboard comprising a plurality of keys, at least some of</p> | <p>one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to vowels and consonants and arranged in accordance with the manner the vowels and consonants are taught, the system being configured such that diacritic vowel signs (Matras) may be accessed by pressing a modifier key with the corresponding vowel key; and half-forms of consonants may be accessed by pressing a modifier key with the corresponding consonant key.</p> <p>2. The character input system of claim 1 wherein the consonants are grouped according Vargs and Non-Vargs arranged in the order in which the characters are taught.</p> |
|--|--|

the keys each being assigned at least one full form Hindi script character, and at least one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to their phonetic characteristics, wherein a half-form of a character may be accessed by pressing a modifier key with a corresponding full form character key.

32. The character input system of claim 31 wherein the keyboard comprises a plurality of Hindi script vowel keys, each vowel key being assigned to a Hindi script vowel, and wherein a vowel sign (mantra) may be accessed by pressing a modifier key with a corresponding vowel key.

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26. A computer system for use with a language that uses Brahmi-derived script, the computer system comprising: a processor; a memory system; a graphical user interface; and a Brahmi-derived script keyboard comprising a

11. A computer system for use with a language that uses Brahmi-derived script, the computer system comprising: a processor; a memory system; a graphical user interface; and a keyboard comprising a plurality of keys, at

|  |  |
|--|--|
| <p>plurality of keys, at least some of the keys each being assigned at least one Brahmi-derived script character, and at least one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to phonetic characteristics of the characters.</p> | <p>least some of the keys each being assigned at least one Brahmi-derived script character, the key assignments being spatially arranged on the keyboard according to the order in which the characters are taught; wherein the system makes half-forms of characters available by pressing a modifier key in coordination with a key that is assigned to a corresponding full character; wherein the system makes a Brahmi-derived script environment available by pressing a single key.</p> |
|--|--|

However, adding or deleting the limitations "wherein the system makes half-forms of characters available by pressing a modifier key in coordination with a key that is assigned to a corresponding full character; wherein the system makes a Brahmi-derived script environment available by pressing a single key..." would not change the scope of the claim and would produce the same end result.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 16-20, 26 and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Laukkanen (U.S. Pat. No. 6,934,564).

As to claim 1, Laukkanen discloses a character input system using a keyboard comprising a plurality of keys, at least some of the keys each being assigned at least one Hindi script character (Laukkanen discloses portable keypad including Hindi script character; col. 1, lines 8-12), and at least one key being assigned a halant (see figure 3), the key assignments being spatially grouped on the keyboard according to their phonetic characteristics (col. 2, lines 5-8).

As to claim 2, Laukkanen discloses a character input system, wherein the key assignments are also grouped according to the vowels and consonants (see figure 6; col. 7, lines 4-16).

As to claims 3-4, Laukkanen discloses a character input system, wherein Hindi script consonants are spatially grouped according to Vargs and Non-Vargs, and wherein the keys comprising each Varg are grouped on keys that are adjacent to one another (figure 6; col. 7, lines 4-16).

As to claim 16-17, Laukkanen discloses a character input system, wherein the keyboard is adapted for use with the Hindi language and an Indian Brahmi-based script based on similarities to Hindi (col. 1, lines 65 through col. 2 line 4).

As to claims 18-20, Laukkanen discloses a keyboard adapted for use character input system with one of the group of Bengali, Telegu, Marathi, Tamil, Gujarati, Kannada, Malayalam, Oriya, Punjabi, Assamese, Manipuri and Sanskrit; and any non-Indian Brahmi-based script (col. 2, lines 42-48).



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As to claim 26, Laukkanen (fig. 1) shows a keyboard computer system for use with a language that uses Brahmi-derived script, the computer system comprising: a processor (Laukkanen teaches mobile station 100 includes a processor (MCU 120); memory system (130); a graphical user interface (140); and a Brahmi-derived script keyboard comprising a plurality of keys (i.e., Hindi text), at least some of the keys each being assigned at least one Brahmi-derived script character, and at least one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to phonetic characteristics of the characters (see figures 6-9).

As to claims 30-31, the claims have substantially the limitations of claims 1-4; therefore, they are analyzed as previously discussed in claims 1-4 above.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-9, 11-14, 27, 28, 33-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Laukkanen in view of Weeks (U.S. Pat. No. 5,880,685).

As to claims 5-6 and 8-9, Laukkanen (fig. 6 Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laukkanen) shows five Vargs of consonant keys containing five phonetically-related consonants in a single row. But, he does not show a keyboard.

However, in the same field of endeavor, Weeks (fig. 1) shows a typewriter keyboard capable of performing many functions.

Therefore, it would have been obvious to one skilled in the art, at the time of the

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invention, to improve upon the computer keyboard, as disclosed by Weeks. Doing so would provide a keyboard with a substantially reduced number of keys/controls.

As to claim 7 and 14 and 33-35, Laukkanen does not explicitly disclose that the five Varg consonant sets are assigned to keys that correspond to q-w-e-r-t, a-s-d-f-g, z-x-c-v-b, y-u-i-o-p, and h-j-k-l-; on a standard keyboard.

However, this is obvious; it would have been obvious to one skilled in the art, at the time of the invention to assign the five Varg consonant sets to keys that correspond to q-w-e-r-t-y keyboard system (see Weeks' q-w-e-r-t-y keyboard system: figure 1).

As to claims 11-12, Laukkanen (fig. 6) shows a character input system comprises a plurality of Hindi script vowel keys, each vowel key being assigned to a Hindi script vowel; and wherein the Hindi vowel keys are grouped together .

Laukkanen does not discloses that the character input are grouped together on a keyboard. However, these limitations are disclosed by Weeks (figure 1). See the motivations above.

As to claim 13, the claim has substantially the limitations of claim 4; therefore, it is analyzed as previously discussed in claim 4 above.

As to claims 27-28 Laukkanen does not discloses a system comprises a virtual keyboard having a touch-sensitive screen.

However, this is obvious; it would have been obvious to one skilled in the art, at the time of the invention to use a system comprising a touch-sensitive virtual keyboard. Doing so would improve the reliability of detecting, classifying, and interpreting input events.

*Allowable Subject Matter*

10. Claims 10, 15, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21, 25 are allowed.

The closest art of record, Laukkanen et al. (U.S. Pat. No. 6,934,564) discloses a method and apparatus for providing Hindi input to a device using a numeric keypad. Laukkanen, however, fails to disclose the limitations of claims 21, 25 and 29.

Claim 21 is allowable because none of the cited references either singular or in combination discloses "... initial consonant keys arranged in a plurality of subsets, each subset comprising keys mapped to a group of phonetically-related initial consonants, at least some of each subset of initial consonant keys being arranged on a single row; final consonant keys mapped to final consonants, at least some of the final consonant keys being arranged in a row; and a halant key mapped to halant character; wherein Brahmi-derived script communications may be inputted quickly and efficiently as a result of the arrangement of character keys and a simplified character set provided through use of the halant character."

Claims 22-24 are allowed by virtue of dependency.

Claim 25 is allowable because none of the cited references either singular or in combination discloses "... mapping initial consonants to initial consonant keys arranged in a plurality of subsets, each subset comprising keys mapped to a group of phonetically-related initial consonants, each subset of initial consonant keys being arranged on a single row; mapping final consonants to final consonant keys arranged in a row; and mapping a halant character to a

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halant key; wherein Brahmi-derived script communications may be inputted quickly and efficiently as a result of the arrangement of character keys and a simplified character set provided through use of the halant character. ”

Claim 29 would be allowed once overcome the claim objection.

Claim 29 would be allowable because none of the cited references either singular or in combination discloses “...a first Varg group of phonetically-related consonant keys comprising keys corresponding to Q-W-E-R-T on a standard keyboard; a second Varg group of phonetically-related consonant keys comprising keys corresponding to A-S-D-F-G on a standard keyboard; a third Varg group of phonetically- related consonant keys comprising keys corresponding to Z-X-C-V-B on a standard keyboard; a fourth Varg group of phonetically- related consonant keys comprising keys corresponding to Y-U-I-O-P on a standard keyboard; and a fifth Varg group of phonetically- related consonant keys comprising keys corresponding to H-J-K-L-; on a standard keyboard. a final group of Non-Varg consonant keys comprising keys corresponding to N- M,-,- /-'[-] on a standard keyboard.”

### ***Response to Arguments***

11. Applicant's arguments filed 1/30/2007 have been fully considered but they are not persuasive.

The Applicant contends, “ Laukkanen was published on June 6, 2003, 18 months after the Applicant's filing date. Applicant believes the rejection under 102(a) is improper and respectfully traverses the rejection. Applicant acknowledges that Laukkanen could have been cited as a reference under § 102(e).

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The Examiner asserts that the rejection of claims 1-4, 16-26 and 30-31 under 35 U.S.C. 102(a) was a typo error. Laukkanen (US Pat. No. 6,934,564) was filed on 1/30/2001.

The affidavit under 37 CFR 1.131 submitted by the Applicant and particularly the (Exhibit A) submitted is insufficient and does not provide any pertinent evidence.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

**or faxed to:** (703) 872-9306 for all formal communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques, can be reached at (571) 272-6962.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3824


Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ritz Alphonse

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August 2, 2007



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